

We claim:

1. A method for controlling pests selected from the group consisting of flies and ticks, comprising applying a cytochrome P450 monooxygenase inducer and an organophosphate pesticide to the locus of said insects, wherein said cytochrome P450 monooxygenase inducer and said organophosphate pesticide are applied in an amount such that the combination thereof is present in a pesticidally effective amount.

2. The method of claim 1 wherein said organophosphate pesticide is selected from the group consisting of coumaphos, diazinon, chlorpyrifos, fenthion, and pirimiphos-methyl.

3. The method of claim 1 wherein said cytochrome P450 monooxygenase enhancer is a triazine.

4. The method of claim 3 wherein said cytochrome P450 monooxygenase enhancer is selected from the group consisting of atrazine, propazine, and simazine.

5. The method of claim 1 wherein said combination of said cytochrome P450 monooxygenase inducer and said organophosphate pesticide is selected from the group consisting of atrazine with coumaphos, atrazine with diazinon, atrazine with chlorpyrifos, propazine with diazinon, atrazine with fenthion, atrazine with pirimiphos-methyl, and propazine with pirimiphos-methyl.

6. The method of claim 1 wherein said pests are selected from the group consisting of blood-feeding flies and ticks.

7. The method of claim 6 wherein said pests are selected from the group consisting of cattle fever ticks (*Boophilus annulatus* and *B. microplus*), the horn fly (*Haematobia irritans irritans*), and the brown dog tick (*Rhipicephalus sanuineus*).

8. The method of claim 7 wherein said cytochrome P450 monooxygenase inducer is applied in an amount effective to synergistically increase the pesticidal activity of said organophosphate pesticide.

9. The method of claim 1 wherein said pests are selected from the group consisting of cattle fever ticks (*Boophilus annulatus* and *B. microplus*), the lonestar tick (*Amblyomma americanum*), the brown dog tick (*Rhipicephalus sanuineus*), the horn fly (*Haematobia irritans irritans*), the stable fly (*Stomoxys calcitrans* L.), the face fly (*Musca autumnalis*), and the house fly (*Musca domestica*).

10. The method of claim 1 wherein said applying comprises applying said cytochrome P450 monooxygenase inducer and said organophosphate pesticide onto an animal host of said insects.

11. The method of claim 10 wherein said animal is selected from the group consisting of livestock, wild animals, and domestic animals.

12. The method of claim 10 wherein said animal is selected from the group consisting of bovine, canine, equine, and Cervidae.

13. The method of claim 10 wherein said applying said cytochrome P450 monooxygenase inducer and said organophosphate pesticide onto an animal comprises spraying, pouring, dipping, rubbing, dusting, oiling, or ear tagging.

14. The method of claim 13 wherein said cytochrome P450 monooxygenase inducer and said organophosphate pesticide are formulated in the same composition.

15. The method of claim 14 wherein said composition further comprises an inert carrier selected from the group consisting of alcohols, ethers, hydrocarbons, halogenated hydrocarbons, glycols, ketones, esters, oils, clays, kaolinite, silicas, cellulose, rubber, talc, vermiculate, synthetic polymers, controlled release microparticles, and controlled release microcapsules.

16. The method of claim 1 wherein said cytochrome P450 monooxygenase inducer and said organophosphate pesticide are formulated in separate compositions.

17. The method of claim 1 wherein said cytochrome P450 monooxygenase inducer and said organophosphate pesticide are formulated in the same composition.

18. The method of claim 17 wherein said composition further comprises an inert carrier.

19. The method of claim 18 wherein said carrier is selected from the group consisting of alcohols, ethers, hydrocarbons, halogenated hydrocarbons, glycols, ketones, esters, oils, clays, kaolinite, silicas, cellulose, rubber, talc, vermiculate, synthetic polymers, controlled release microparticles, and controlled release microcapsules.

20. A composition comprising atrazine and coumaphos.

21. The composition of claim 20 further comprising an inert carrier.

22. The composition of claim 20 wherein said atrazine and said coumaphos are present in an amount such that the combination thereof is effective as an pesticide against cattle fever ticks.

23. The composition of claim 20 wherein said atrazine is present in an amount effective to synergistically increase the pesticidal activity of said coumaphos.

24. The composition of claim 20 wherein said atrazine is present in an amount effective to synergistically increase the pesticidal activity of said coumaphos against cattle fever ticks.

25. A composition comprising a triazine and an organophosphate pesticide selected from the group consisting of

atrazine with diazinon, atrazine with chlorpyrifos, propazine with diazinon, atrazine with fenthion, atrazine with pirimiphos-methyl, and propazine with pirimiphos-methyl.